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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/820,696

04/09/2004

Won-Kyu Bang

P57046

8730

7590

10/16/2006

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EXAMINER

BROUSSARD, COREY M

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,696

Applicant(s)

BANG ET AL.

Examiner

Corey M. Broussard

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8,9 and 11-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,9 and 11-20 is/are rejected.
- 7) ☒ Claim(s) 21-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

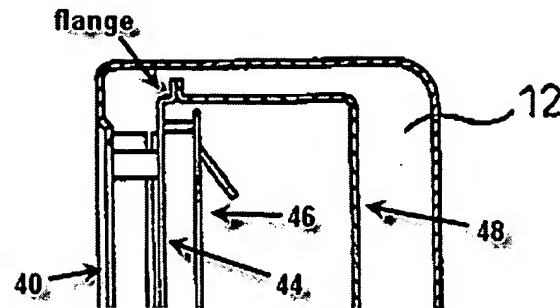
DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

a. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 8, 9, 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichimura (US Pub 2002/0149906) in view of Matsuoka et al. (PN 6,104,451). With respect to claim 1, Ichimura teaches a display apparatus, comprising: a display panel (40); a chassis comprising a base (44), the base of the chassis supporting the display panel (see Fig. 2, 6, ¶ [0045]), the chassis further comprising a flange (the top edge of 44 has a flange, see portion of Fig. 2 submitted below) extending from an upper edge of the base as a single body and arranged along the upper edge of the base and adapted to prevent the base from bending, a printed circuit board (46) with parts mounted thereon, the printed circuit board being mounted on the base of the chassis and being adapted to drive the display panel (the display 40 is an output device for the computer comprising the motherboard 46); and a case (front cover 42 and back cover 50 make up a case) accommodating the display panel, the chassis, and the printed circuit board.



3. Ichimura lacks specific teaching of a hole perforating the flange. Matsuoka teaches that a flange is perforated by a plurality of air passage holes (see Fig. 1 clearly illustrating air currents moving through the upper portion of 230. This would suggest to a worker in the art that the horizontal and vertical portions have air holes. Either the horizontal or vertical portions can be fairly characterized as a flange of the other. See also Fig. 8 and col 6, 41-43). It would have been obvious to a person of ordinary skill in the art to combine the display device of Ichimura with the teaching of air venting holes of Matsuoka for the benefit of a display device with air vents increasing the cooling ability of the device.

4. With respect to claim 2, Matsuoka teaches a display apparatus wherein the case is perforated by a plurality of air inlet holes in a rear lower portion and a plurality of air outlet holes in a rear upper portion (col 11, 8-15).

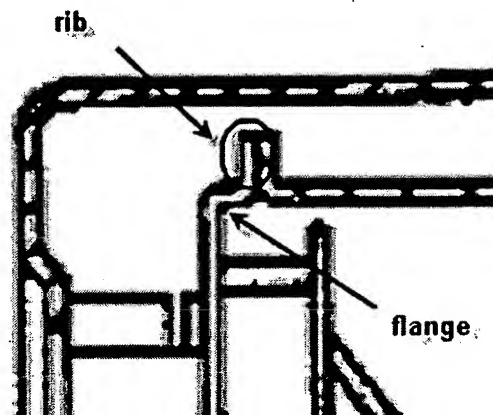
5. With respect to claim 3, Matsuoka teaches that a flange is perforated by a plurality of air passage holes (see Fig. 1 clearly illustrating air currents moving through the upper portion of 230. This would suggest to a worker in the art that the horizontal and vertical portions have air holes. Either the horizontal or vertical portions can be fairly characterized as a flange of the other. See also Fig. 8 and col 6, 41-43).

Art Unit: 2835

6. With respect to claim 4, Ichimura and Matsuoka lack specific teaching of the holes of the flange being rectangular in shape. A change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Therefore it would have been obvious to a person of ordinary skill in the art to choose rectangular shaped holes for the benefit of a larger opening ratio (see col 15, 50-52).

7. With respect to claim 5, Matsuoka teaches the hole perforating the flange being elliptical in shape (see Fig. 9 clearly showing round holes which are elliptical).

8. With respect to claims 6, Ichimura teaches wherein the chassis further comprises a reinforcing rib (the flange of 44 has an rib at it's end, see portion of Fig. 2 below indicating the rib).



9. With respect to claim 8, Matsuoka teaches wherein the hole perforating the flange (holes of 230) is in operational relationship with the plurality of air outlet holes (1040) perforating the case (1000, see Fig. 1, 9, col 11, 32-35).

10. With respect to claim 9, Ichimura teaches that the flange on the chassis is essentially perpendicular to the base of the chassis and extending towards said rear cover (see Fig. 2). As stated in claim 2, Matsuoka teaches that the air holes are on a rear cover of the case.

11. With respect to claim 11, Matsuoka teaches wherein the display apparatus is absent a fan (see col 5 33-37).

12. With respect to claim 12, Matsuoka teaches wherein the display panel (100) is a plasma display panel (col 17, 26-29).

13. With respect to claim 13, Matsuoka teaches wherein the display apparatus further comprises flexible printed circuits (171) adapted to drive the display (see col 13, 65-7).

14. With respect to claim 14, Ichimura teaches A display apparatus, comprising; a display panel (40) displaying variable images; a chassis comprising a base (44), the base of the chassis supporting the display panel (see Fig. 2, 6, ¶ [0045]), the chassis further comprising a flange (the top edge of 44 has a flange, see portion of Fig. 2 used for claim 1 above) extending from an upper edge of the base as a single body and arranged along the upper edge of the base, the flange being adapted to prevent the base of the chassis from bending; a printed circuit board (46) with parts mounted thereon, the printed circuit board being mounted on the base of the chassis, the parts on the printed circuit board being adapted to drive the display panel (the display 40 is an output device for the computer comprising the motherboard 46); and a case housing the display panel, the chassis, and the printed circuit board (front cover 42 and back cover

Art Unit: 2835

50 make up a case). Ichimura lacks specific teaching of holes in the flange or cover. the case having a rear cover, the hole on the flange being near one of said two sets of holes in said rear cover. Matsuoka teaches that a flange is perforated by a hole (see Fig. 1 clearly illustrating air currents moving through the upper portion of 230. This would suggest to a worker in the art that the horizontal and vertical portions have air holes. Either the horizontal or vertical portions can be fairly characterized as a flange of the other. See also Fig. 8 and col 6, 41-43); wherein the rear cover is perforated by two sets of holes (col 11, 8-15), the hole on the flange being near one of said two sets of holes in said rear cover (holes 1040 in the rear cover 1020 are near the flange, see Fig. 1, 8, 9). It would have been obvious to a person of ordinary skill in the art to combine the display device of Ichimura with the teaching of air venting holes of Matsuoka for the benefit of a display device with air vents increasing the cooling ability of the device.

15. With respect to claim 15, Matsuoka teaches wherein the two sets of holes (1040-1042) in the rear cover (1020) and the hole in the flange of the chassis being arranged to provide less obstruction to convection currents brought about by hot air rising from the printed circuit board and the parts thereon being heated while driving the display panel (see Fig. 1, the air currents illustrated show air flowing through the upper portion of 230 and out of the case, see also col 11, 20-35).

16. With respect to claim 16, Ichimura teaches wherein the printed circuit board (46) is on a rear side of the chassis base (44), the display (40) being on a front side of the chassis base, the flange (upper portion of 44) being on a rear side of the chassis base (see Fig. 2, 6).

17. With respect to claim 17, Matsuoka teaches wherein the display apparatus is a plasma display (col 17, 26-29).

18. With respect to claim 18, Matsuoka teaches wherein the flange is perforated by a plurality of elliptical-shaped holes along an entire length of the flange (see Fig. 8, the upper portion of 230 has many elliptical-shaped holes).

19. With respect to claim 19 and 20, Ichimura teaches wherein the chassis further comprising a reinforcing rib (the flange of 44 has an rib at it's end, see rejection of claims 6 and 7 above) attached to an end of the flange opposite the base, the reinforcing rib running along an entire length of the flange (see Fig. 2, 6).

Allowable Subject Matter

20. Claims 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. The following is a statement of reasons for the indication of allowable subject matter: The allowability resides in the overall structure of the device as recited in dependant apparatus claim 21 and at least in part, because claim 21 recites: "the flange extending over and beyond the parts on the printed circuit board".

The aforementioned limitations in combination with all remaining limitations of claim 1 are believed to render said claim 21 and all claims currently dependent therefrom patentable over the art of record.

Art Unit: 2835

The closest reference to the present invention is believed to be Ichimura (US Pub 2002/0149906).

Ichimura teaches wherein a base supports a display panel and circuit board and comprises a flange as a single body, but did not disclose "the flange extending over and beyond the parts on the printed circuit board".

22. The allowability resides in the overall structure of the device as recited in dependant apparatus claim 22 and at least in part, because claim 22 recites: "the reinforcing rib extending downward from the flange in a direction parallel to the base of the chassis".

The aforementioned limitations in combination with all remaining limitations of claims 14 and 19 are believed to render said claim 22 and all claims currently dependent therefrom patentable over the art of record.

The closest reference to the present invention is believed to be Ichimura (US Pub 2002/0149906).

Ichimura teaches wherein a base supports a display panel and circuit board and comprises a flange as a single body, but did not disclose "the reinforcing rib extending downward from the flange in a direction parallel to the base of the chassis".

23. The allowability resides in the overall structure of the device as recited in dependant apparatus claim 23 and at least in part, because claim 23 recites: "the reinforcing rib being on an opposite side of the printed circuit board than the base of the chassis".

Art Unit: 2835

The aforementioned limitations in combination with all remaining limitations of claims 14 and 19 are believed to render said claim 23 and all claims currently dependent therefrom patentable over the art of record.

The closest reference to the present invention is believed to be Ichimura (US Pub 2002/0149906).

Ichimura teaches wherein a base supports a display panel and circuit board and comprises a flange as a single body, but did not disclose "the reinforcing rib being on an opposite side of the printed circuit board than the base of the chassis".

24. The allowability resides in the overall structure of the device as recited in dependant apparatus claim 24 and at least in part, because claim 24 recites: "the reinforcing rib being narrower than the flange".

The aforementioned limitations in combination with all remaining limitations of claims 14 and 19 are believed to render said claim 24 and all claims currently dependent therefrom patentable over the art of record.

The closest reference to the present invention is believed to be Ichimura (US Pub 2002/0149906).

25. Ichimura teaches wherein a base supports a display panel and circuit board and comprises a flange as a single body, but did not disclose "the reinforcing rib being narrower than the flange".

26. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

27. Applicant's arguments filed July 5, 2006 have been fully considered but they are not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The prior art to Matsuoka clearly teaches the desirability of air passage holes for cooling in the base of a display supporting the display panel and circuit board.

Matsuoka anticipates the claimed invention except for the limitation of the flange and the base being a single body. Anticipation is the essence of obviousness. Ichimura teaches an alternate related design teaching the missing limitation, and benefits from the teachings of Matsuoka. Therefore the obviousness rejection is considered proper and maintained.

28. In response to the remaining arguments, the Applicant is improperly reading limitations from the specification into the claims. See MPEP 2111. The Applicant is using the specification to implicitly limit the claim terms in ways that have no express basis in the claims. Taking the broadest reasonable interpretation of the claim

language, the flange and rib taught by Ichimura fall within the scope of the invention as claimed.

Conclusion

29. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

30. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey M. Broussard whose telephone number is 571 272 2799. The examiner can normally be reached on M-F 7:30am-6:00pm (Flextime).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2835

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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